Chemical technologies for probing embryonic development.

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Public Summary:

Scientific Abstract:
Embryogenesis is a remarkable program of cell proliferation, migration, and differentiation that transforms a single fertilized egg into a complex multicellular organism. Understanding this process at the molecular and systems levels will require an interdisciplinary approach, including the concepts and technologies of chemical biology. This tutorial review provides an overview of chemical tools that have been used in developmental biology research, focusing on methods that enable spatiotemporal control of gene function and the visualization of embryonic patterning. Limitations of current approaches and future challenges are also discussed.